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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SOHN, SEUNG C

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,003

Applicant(s)

LANDOLT, OLIVER

Examiner

Seung C. Sohn

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 7-14, 20, 21 and 27-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 15-19, 22-26 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species II in No. 6 is acknowledged.
2. Claims 7-14, 20-21 and 27-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species I, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because the filing date of the claimed provisional application is incorrect as "07/06/01", instead of correct -- 07/06/00 --.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "110" as disclosed in Page 3, line 11. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "101" and "120" in Fig. 1 have both been used to designate mechanical scanning device. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The abstract of the disclosure is objected to because "29A" before "visual sensor" in line 1 should be removed. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities:

On Paragraph 44, line 1, "410" after "A motor" should be changed -- 420 --.

On Parahraph 47, line 3, "Springs" after "and the" should be changed to -- springs --. Appropriate correction is required.

Claim Objections

8. **Claim 14** is objected to because of the following informalities:

On line 1, "are" before "an array" should be changed to -- is --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. ***Claim 39 is rejected under 35 U.S.C. 112, first paragraph***, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not disclose moving any electromagnetic energy and sensing the information about the electromagnetic energy.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. ***Claims 1-6, 15-19 and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Morokawa (Patent No. US 4,581,649).***

Referring to claim 1, Morokawa shows in Fig. 5 the following elements of Applicant's claim:

- a) a photoreceptor circuit (506, i.e., image sensor) (Col. 3, lines 17-19);
- b) an optical system, including an element (502, i.e., vibrator) that changes a position of image information relative to said photoreceptor circuit (506) (Col. 3, lines 34-47 and Col. 4, lines 9-14); and

c) a processing circuit (512, i.e., data selecting unit), operating to produce pulsed outputs at timings that are dependent on changes of said image information (Col. 3, lines 21-25).

Referring to claim 2, Morokawa discloses that said photoreceptor circuit (506) is formed on a semiconductor substrate, and said processing circuit (512) is formed on the same semiconductor substrate as said photoreceptor circuit (Col. 4, lines 7-8).

Referring to claim 3, Morokawa discloses that said processing circuit includes a circuit that changes spatial variations in light intensity into temporal fluctuations formed by digital pulses (Col. 3, lines 21-22).

Referring to claim 4, Morokawa discloses that said processing circuit encodes changes in said output signal which are either in positive directions or negative directions into said digital pulses (Col. 3, lines 60-61).

Referring to claim 5, Morokawa discloses that said photoreceptor circuit includes a photoreceptor element, and a logarithmic amplifier associated with said photoreceptor element (Col. 4, lines 4-6).

Referring to claim 6, Morokawa discloses said processing circuit includes a differentiation element, and a half wave rectification element which converts both positive and negative signals into a common level (Col. 3, lines 25-27).

Referring to claim 15, Morokawa shows in Fig. 5 the following steps of Applicant's claim:

a) acquiring image information using a first element (502, i.e., image sensor) (Col. 3, lines 17-19);

b) using a second element (502, i.e., vibrator) to move a position of image information that is acquired by said first element (Col. 3, lines 18-19); and

c) processing said image information acquired by said first element, to obtain temporal information about said image information (Col. 3, lines 21-33).

Referring to claim 16, Morokawa discloses that said temporal information includes pulses.

Referring to claim 17, Morokawa discloses using said pulses, and timing of said pulses, to determine information about said image.

Referring to claim 18, Morokawa shows in Fig. 5 the following elements of Applicant's claim:

a) a photoreceptor circuit (506, i.e., image sensor), formed on a semiconductor substrate, and including a plurality of photoreceptor elements, and a plurality of amplifiers, with an amplifier associated with each of said photoreceptor elements (Col. 1, lines 7-8);

b) an optical position moving element (502, i.e., vibrator), operating to change a position where an incoming image scene contacts said photoreceptor circuit (Col. 4, lines 9-14); and

c) a processing circuit (512, i.e., data selecting unit), formed on said semiconductor substrate, and having a processing part associated with each said photoreceptor element, said processing circuit producing an output indicative of information received by said photoreceptor element (Col. 4, lines 7-8).

Referring to claim 19, Morokawa discloses said processing circuit produces information indicative of a temporal information in said photoreceptor element (Col. 3, lines 43-46).

Referring to claim 22, Morokawa discloses said amplifiers that are associated with each of said photoreceptor elements produce a logarithmically scaled output.

Referring to claim 23, Morokawa discloses said processing circuit half wave rectifies information indicative of the image scene, and obtains a derivative of the half wave rectified signal.

Referring to claim 24, Morokawa discloses using information about phase locking of said pulses to determine information about a spatial pattern in the image.

Referring to claim 25, Morokawa discloses obtaining a histogram indicating a number of spikes occurring as a function of position of a given integration time, and using said histogram to determine information about said image (Col. 3, lines 25-27).

Referring to claim 26, Morokawa discloses a sensor, determining a position of said optical position moving element, and wherein said processing circuit operates using information from said sensor.

13. Claim 39 is rejected under 35 U.S.C. 102(b) as being anticipated by Hideshima (Patent No. US 4,887,125).

Referring to claim 39, Hideshima discloses the following steps of Applicant's claim:

- a) moving some aspect of electromagnetic energy (light) relative to an array of photoreceptors (56, i.e., CCD line sensor) (Col. 3, lines 63-68); and
- b) sensing the information about said electromagnetic energy (light) that is independent of any fixed pattern noise in said array of photoreceptors (Col. 8, lines 22-37).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Endo et al. (Patent No. US 4,607,287) discloses a solid-state image sensor having fixed bimorph piezoelectric vibrators.

Gural (Patent No. US 4,748,507) discloses a solid-state imageing device having means for compensating for distortions in the image caused by shifting of the image relative to the imaging device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (703) 308-4093. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SCS

SCS
February 23, 2003



Kevin Pyo
Primary Examiner